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THE SOCIETY OF THE FUTURE

A Forecast from a New Angle

BY HERDMAN F. CLELAND

FOR millions of years to come the earth will probably be suitable for the habitation of the human race. Such are the conclusions that have been reached by a careful analysis of the past as revealed by a study of the rocks and their contained fossils, and by the researches of astronomers. This belief rests upon the facts that for many millions of years the earth has been inhabited by animals that have required the same environment as man; that there is no reason to believe that the sun's heat will materially decrease for eons to come; or that the earth will be burned by collision with some great star. However, during the vast geological ages the climates were not congenial at all times nor in all places. During some periods the seas of the world were smaller than now and the continents were larger and great deserts occupied them; during others the seas spread over thousands of square miles of the continents and moist climates were nearly universal; during still others great ice sheets moved over the lands but did not cover the entire world. It has even been suggested that we are now in an interglacial stage, and that glaciers may again move south in North America and Europe, possibly to reach the Ohio River as they once did.

Notwithstanding such vicissitudes; notwithstanding the fact that at times life was nearly wiped out and whole races of animals and plants became extinct, always some survived and from some of these sprang the life of to-day. No place in the world was continuously habitable during the world's history but always some places, now here and now there, were suitable for life, and it is probable that for untold centuries in the future similar conditions will prevail.

There is at least one serious element of doubt in all forecasts of the duration of the human race: geological history

records, that without apparent cause, races that had lived on a continent and had had their entire evolution there suddenly disappeared, leaving no record except that afforded by their broken and fossilized bones. The horse and camel races are examples. They lived and evolved in North America from small, five-toed creatures to nearly their present forms, and then with apparent suddenness became extinct. But the same regions which formerly supported great herds of these animals are now as favorable for their growth and increase as any place on earth. Their extinction on the Western Hemisphere was due, with little doubt, to epidemics, and if the human race vanishes during the next 1,000,000 years its disappearance will doubtless be brought about by some epidemic or epidemics and not through a great change in climate or other physical conditions. The progress of medical science and bacteriology would seem to make such a fate unlikely. Moreover, man lives under more diverse conditions and over a greater part of the world than any other animal of the past or present and it is probable, therefore, that in some place or places he will find a refuge from any disease.

One may, then, with reason, assume that man will continue to populate the earth for many hundreds of thousands of years to come. If this is true it is interesting to speculate on the kind of creature the man of the distant future will be. Would you, were you to return to the earth in the year 1,001,920, be able to recognize your descendants as human beings, or would you find them so modified that they would appear to be, or would be in fact, a higher or lower race? Geology, or more strictly paleontology, affords many examples of animals that existed a million or more years ago which are nearly identical with their living descendants. There is a small lizard living in New Zealand today which is the little-changed descendant of one that lived in Permian times, a period so remote that at least 10,000,000 years have lapsed since then. The tapir of the Amazon forests could not be distinguished by the casual observer from an ancestor that lived 3,000,000 years ago. The turtle, one of the strangest animals of the geologic past and of the present, had the same architecture when the earth was 9,000,000 of years younger than it is now. Man, like these animals, seems to have reached the climax of his evolution, if indeed, he has not passed it and is not now retrogressing.

Some of the men (Cro Magnon) of the Old Stone Age (Paleolithic) had large, finely-moulded heads and splendid bodies and were, as far as one can judge from their skeletons, one of the finest races the world has seen, and yet, at a conservative estimate, these men lived 16,000 to 20,000 years ago.

Granted then, that there is likely to be little physical improvement in the human race if Nature is not interfered with (although this cannot be proved), is there also a limit to the development of the intellectual and rational powers of man? It is generally assumed that there is none, but this supposition is not supported by evidence, although it cannot be disproved. Fortunately, much is known about the early Greeks; their bodily form is shown in their works of art; the quality of their intellect is revealed in their writings; and their technical skill is indelibly recorded in their architecture and sculpture. In all of these qualities they have never been surpassed. As far as one can judge from their writings, no philosophers with greater intellectual powers than Plato and Socrates have yet appeared. When the appliances at his disposal are considered, Aristotle ranks as one of the world's greatest scientists, as well as a great philosopher. These men lived 2,000 years ago,—a short time geologically,—but in these twenty centuries no advance in intellectual power appears to have been made.

What will be the effect of philanthropy as now practiced, upon the physical and mental betterment of the race? With the progress of science and the spread of a spirit of altruism the law of natural selection,—the elimination of the physically and mentally unfit,—has already, in large measure, ceased to be operative in many countries and the result in many European countries and in our own is that the offspring of mentally and physically imperfect persons pass their inferior qualities to their descendants and thus prevent racial improvement, if, indeed, they are not causing the deterioration of the race.

Physical and mental improvement in the past was brought about largely by adverse conditions. The horse would not have been "one of the most perfect pieces of machinery in the living world," so superb that it can be said that among the works of human ingenuity "there is no locomotive so perfectly adapted to its purpose, doing so much work with so small a quantity of fuel as this machine

of nature's manufacture," if it were not for its untold centuries of struggle against increasing aridity and a changing vegetation. The death rate must frequently have been enormous and doubtless many times the race was on the verge of extinction; but this mortality was greatest among those whose structure was less suited for the new conditions or whose brain failed to increase in size and power. If during these long years those horses that lacked the qualities which best suited them for their environment, or whose qualities were below the average, had been preserved,—as the unfit of the human race are being saved today,—they would have diluted the blood of those best suited to survive, and the horse, as we now know it, would not have been evolved, but instead, the race would doubtless have become extinct. In the past, easy conditions have not, in general, resulted in progressive change to a higher type.

An interesting example of the effect of hard conditions on man can be gleaned from two reports that have recently appeared. The report of the Surgeon General of the U. S. Army on the results of the physical examination of the drafted soldiers shows that the negroes in the United States Army were, on the average, physically superior to the white soldiers, and that they were also less subject to bacterial diseases. The second report is one from New York City on the living conditions of several thousand families. This investigation shows that the mortality among negro children is much greater than among those of any other class in the city.

Other reports show that in 1916 the mortality of negroes to whites in cities was as 5 to 3. These apparently contradictory reports are really in accord. Because of the unsanitary conditions under which the negroes usually live, the weaker negro children have little chance of reaching maturity and, as a consequence, it is in general only the best physical specimens that rear families. The effect of this selection is seen in the fine physique of the American negroes. Another example points to the same conclusion: the Jewish race for hundreds of years has been compelled to live in unhygienic environments and under unfavorable economic conditions. An indirect effect has been a virile race which, when transplanted to such genial surroundings as are found in America, soon developed leaders in many lines of financial and intellectual endeavor.

As has been stated, evolution has progressed most rapidly and effectively under hard conditions. Geological history teaches us an obvious lesson in the present crisis. Now that the World War is over and the peoples of Europe are suffering for the want of sufficient clothing and food, and will lack much that before the war they thought to be the necessities of life, we must not conclude that the future generations of the people who are enduring these hardships will be less sturdy mentally or physically than those who were born in lands that were not so devastated or impoverished. On the contrary, the qualities which will be developed by the adverse conditions under which they will live may make them masters of the people of the Americas who are now living at ease, and who are not being driven by necessity to improve. The Japanese in America afford a striking illustration. This race is able to replace the whites in the agricultural districts of California because, during a struggle of hundreds of years, the Japanese have become enured by severe competition and have learned to live comfortably on food and in habitations that Americans and Canadians consider inadequate.

One can hardly err in prophesying that the Malthusian law which states that the race will increase numerically faster than the means of subsistence, will not be operative. Attention has repeatedly been called to the small families of the educated. Large families in the United States, France, and Great Britain are rare, except among the ignorant. The large family in Germany was encouraged for the obvious reason that the greater the number of sons the greater the power of the military. In the not distant future, possibly before the food supply is inadequate, laws will be enacted to prevent too large families, if indeed such laws will be necessary.

The problem of race: the feeling of superiority of the white race for the yellow, of the yellow race for the white, and the red for the black, has been a source of trouble in the past and will continue to be one of the great problems of the near future. But will not the time come when races, as such, will cease to be? The American Indian in the United States affords an interesting proof. Some years ago measurements of the heads of Indians of Minnesota were made in order to determine which were of pure blood and which were not. It was found that about two-thirds of the

Indians of Minnesota contain white blood. The Indians on the reservations in New York State probably have more white than Indian blood in their veins.

Provincialism must necessarily become less and less pronounced as the peoples of different countries learn more and more about and mingle with the peoples of other countries. This was ordained when the steamboat, electricity, the aeroplane and other inventions brought the countries of the world together. One result of this closer contact which will accompany the elimination of space will be that the problems of each country will become the problems of the world.

This interdependence of peoples is already felt in ways that would have seemed impossible one hundred years ago. A few examples will suffice to illustrate this condition: a disaster to the Gloucester fishing fleet brings hardship to the Cubans who depend upon the cod of the Grand Banks for part of their food; a hurricane destroys the banana crop of Central America and causes real distress among the poor of New York and Boston; a severe drought in Argentine brings death to the great herds of cattle of that country and the prices of meat and shoes go up throughout the world; a prolonged strike in the woolen mills of England reduces the output of cloth, and the poor of France and Italy must suffer,—and so on.

The war has shown that even now no country is entirely independent. Moreover, who can doubt that even the disadvantages of climate and environment may, to a considerable degree, disappear as the result of mechanical appliances, just as in some of the cotton mills of Alabama the air is cooled in summer by ice machines and is provided with the amount of moisture required for the best weaving of the cloth.

The possibility of artificial selection must not be overlooked in any consideration of the future of the human race, for if mating is determined by the Government, the improvement of the race may be rapid and striking. All familiar with the great number and diverse varieties of pigeons, of dogs, of goats, of horses, of cattle, and of plants which have been produced, almost at will, by artificial selection will understand the possibilities of a great modification in the form, structure and intellectual power of our race if eugenics are compulsory and selections are

wisely made. One must curb the imagination when forecasting the outcome. If our social organization becomes as perfect as that of some insects, this will doubtless be done. Who knows what the functions of the State of the future may be? This is a great, unknown factor, but when the vast stretches of time during which the race will probably exist are considered, it does not require a vivid imagination to picture this human product of artificial selection as super-men and super-women. Without artificial selection, however, the man of the future will probably differ little from the people of our own time.

The geological history of ants offers a suggestion as to what may be in store for our descendants. Ants preserved in amber,—the fossilized gum of the pine in which they were entrapped in Oligocene times, perhaps three millions of years ago,—are said to be in all respects like the ants of today; their physical form cannot be distinguished from that of their modern relatives, and their social organization was so far advanced that the workers, the queens, and the males had the same characters as now. With the completion of mental and physical evolution the social evolution of the ants progressed until it went further than it has among human beings. (It is possible, however, that physical evolution came to an end because of their social habits). When carefully analyzed our present day civilization and social organization are seen to be in many respects,—some would say in most respects,—illogical, uneconomical, and unjust, and consequently unstable. The old order,—the product of individualism,—when every man works for himself and not for the State, is passing away and society is becoming adjusted to new and more permanent conditions.

What, then, will be the future of the human race? If, as has been suggested, one can find a parallel in the evolution of bees, ants, and other social insects, one gets a glimpse into the future; and if, as the history of other animals teaches, man has nearly or quite reached the limit of the mental and physical development of which he is capable by natural means, it seems inevitable that the future will be largely spent in perfecting his social organization. But before this adjustment can be completed many false steps will have been taken,—some so unfortunate that, for a time, the right road will have been lost,—but such errors, although destructive to many individuals and the

cause of untold sufferings, will be warnings to prevent similar mistakes. One can hazard the prophecy that at some time,—perhaps less remote than some of us think,—the individual will be an integral part of the social machine; that all will work for the common good; and that the food and the housing will be the same for all. In the bee-hive when the colony realizes that the drone is not necessary for its perpetuation he is driven away or is actually put to death, and this is also the fate of other individuals who are not contributing to the well-being of the colony. One wonders what will be the fate of the lazy, the vicious, the insane, and the permanently disabled in the human society of the future. However, one must not carry the parallel too far, for man is unique among animals in the high development of the brain.

But what will be the result if, in order still further to promote its efficiency, this society of the future regulates marriage so as to produce strains that will more effectively do its work? The possibilities are startling. As the great draft horse and slender race horse have been developed by careful selection, so one human strain might be developed for great physical strength, another for manual dexterity, and still another for intellectual power; of this last some would have an aptitude for invention, some for executive work, some for literature, and some for other lines of intellectual endeavor.

There seems no likelihood that this future society will be for the proletariat, as the Bolsheviki teach, nor, on the other hand, will it be for the bourgeoisie, but in this perfected organization search will doubtless be constantly made for talented men and women in order that all may profit by the work of genius. When one takes his mind from the things of the present and allows himself to think of the thousands and perhaps hundreds of thousands of years during which man will probably inhabit the earth, he realizes that the race is in the infancy of its social evolution, and he can form some feeble conception of what lies before it.

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